Podcast: Imagine This

Episode: Why do volcanoes erupt?

Duration: 9’07

[ABC Podcast sting - This is an ABC Podcast]

Bri: Hello, my name's Bri.

[Dramatic music builds, volcano rumbles]

Bri: Today on Imagine This we're going to be looking at one of the most powerful forces of nature. It's something that has been happening on this planet for a really long time. Something that can sometimes look like a mountain, but it's very hot.

Kids: Volcanoes.

A volcano!

Bri: Yes, a volcano. Today's question comes from Nicholas

Nicholas: Why do volcanoes erupt?

Bri: Nicholas wants to know why the volcanoes erupt.

[Anticipatory music]

Bri: Have you ever seen a volcano? So what do they look like?

Kids: It looks like red!

Like a big mountain with a hole in the top.

It's got lava.

It's putting lava out.

Bri: Yep. You might've seen the lava coming out of a volcano.

Kids: The lava goes out like... Pfff!

Pffff!

Bri: Today on the show. We're going to talk to Heather Handley, who is a volcanologist, which means she studies volcanoes. Hi Heather.

Heather: Hello.

Bri: Heather, if you study volcanoes, you must have seen a few.

Heather: I've seen lots of volcanoes. I've even seen the lava flowing out of a volcano.

Bri: On a video?

Heather: No. With my own eyes.

Bri: In real life?

Heather: Yes.

Bri: What was that like?

[Dramatic orchestral music]

Heather: I stood on the crater of the volcano and the ground started trembling and then there was this big explosion and a shower of hot red rocks. And I was scared that one of them would fall on my head.

Bri: Wow! What does the volcano sound like?

Heather: When it's erupting sometimes a volcano can sound like this – crrrrrrr!

Bri: Like this? Pfft pfft

Heather: Err... it kind of goes like this - crrrrrrr.

Kids: They sound like booft bacrrr!

[Kids giggle]

Bri: Wow. That would be so exciting.

Heather: Yeah. And it feels really hot.

Bri: What do volcanoes look like?

[Pleasant classical music]

Heather: Volcanoes come in all different shapes and sizes. Some look like mountains and the hot rocks explode out of the top.

[Kids make explosive noises]

Heather: Some look like hills and the lava gurgles out over the land.

[Lava bubbling]

Kids: Glug, Glug, Glug. Gurgle, Gurgle. Glug, Glug, Glug.

Heather: And some are just big holes in the ground. They all look different and they all behave differently.

Bri: How does the volcano behave? Are they on their best behaviour?

Heather: Not really. Volcanoes just do whatever they want.

Bri: They do what they want?

Heather: No one can stop them.

Bri: We can't stop that lava from coming out?

Heather: No.

Bri: Why not?

Kids: Because it's lava!

Because it's lava and that's what lava does.

Bri: So where does the lava come from?

Heather: Deep underground. Underneath the Earth's crust.

Bri: The earth has a crust? Like the crust on my sandwich.

Heather: Yeah. The top bit. The part that we walk on. We call that the crust.

[Traffic noises, wildlife]

Bri: So all of the houses and the roads and even my garden are on the crust of the earth.

Heather: Yes. So deep under the crust there are some parts of the earth that are molten rock called magma.

[Magma bubbling]

Kids: It's lava on the earth.

Heather: Yeah. Sort of. If it's out of the volcano we call it lava.

Kids: Lava. Lava. Lava.

Heather: If it's below the volcano, we call it magma.

Kids: Magma, magma.

Bri: What is magma?

Kids: Magma is liquid or melted rock underground.

Bri: Is it hot?

Heather: Oh yeah. The magma is so hot it looks like fire.

Kids: It's hot stuff that's a bit like fire but it's burnier and liquid.

Heather: Yeah. When the magma comes up from under the ground, it can make a crack in the earth's surface and the place where it comes out is what we call a volcano.

Bri: So how does the volcano erupt?

[Ballet music]

Heather: The magma underneath starts to build up before a volcano erupts. The molten magma needs somewhere to go. As the magma rises to the surface, the pressure starts to build up. The pressure builds and builds until it's about ready to burst.

Kids: It gets very squishy in the volcano.

Bri: It's getting really squishy in there.

Heather: That volcano really needs to let off some steam.

[Kids make volcano noises]

Heather: When the pressure builds up so much that it's about to pop the hot magma rises up, up, up to the surface of the earth. And when it reaches the surface, we call that magma lava.

[Music builds to dramatic crescendo]

Kids: Lava and it kind of squishes and bursts out. It's fiery!

Bri: Lava is so cool.

Heather: No Bri. Lava is hot. Really hot!

Bri: How hot?

Kids: Really hot!

Hotter than this! Hot like Pie. Like dinner.

Bri: Hotter than the hottest dinner?

Heather: Hotter than the hottest oven.

Kids: It burns!

Bri: Hot enough to burn?

Heather: Yes. Hot enough to melt most things in its way.

Bri: Are volcanoes dangerous?

Heather: Yeah. Volcanoes are dangerous but we need volcanoes.

Bri: Why?

Heather: Well, the ash from a volcano is kind of like food for the soil and it makes the plants grow really big. And when the lava cools, it forms rocks and mountains.

Kids: I think the lava turns into Rock.

It's coming down. The lava's coming down.

And then it turns into rock like a black one?

Bri: Does the lava cool down and turn into black rock?

Heather: Yes. Volcanoes created the land that we stand on.

Bri: Ah, the crust.

Heather: Yes.

Bri: So where are the volcanoes?

Heather: Volcanoes are found all over the world. Even in Australia. There are some parts of the world that have lots of volcanoes, but most of the volcanoes on earth are under water.

[Water rushing]

Bri: Volcanoes under water?

Heather: Deep in the ocean.

Bri: Not even the ocean can stop a volcano?

[Volcano building]

Heather: No. Volcanoes are powerful, really powerful.

[Dramatic music swell]

Bri: So Nicholas, when a volcano erupts, the magma underneath starts to build up and that pressure builds up so much that the magma pushes through the Earth's crust and when it comes out we call it...

Kids: Lava!

Bri: Yeah. Lava and the place where that lava comes out? That's what we call a volcano. Scientists have been studying volcanoes for years. They know where they are, when they're going to erupt and some scientists, like Heather, even go near them to find out more but most people don't like to because they're very hot.

Kids: Hot! Hot!

They're really hot.

Bri: So even though they can be dangerous, volcanoes are so important. They helped to create the land that we stand on. And that's a big job. So it takes a lot of power.

[Kids make volcano noises, giggle]

[Music concludes]

Bri: Imagine This is a co-production brought to you by ABC Kids Listen and The Conversation. I'd like to thank Heather Handley from Macquarie University, Hamish Camilleri for mixing and all the kids who had their say on today's program. I'm your host, and producer, Brianna Peterson. To find more episodes of Imagine This, you can download the free ABC kids Listen App or find them wherever you get your podcasts.